

Amendments to the Specification

The following new paragraph is ADDED after the paragraph that begins at **page 35, line 12** with “The OEVI further similarly implements”:

“As shown in the **FIG. 12c** example, a user pointing in the email pane of window 1203 (i.e., pointing at a particular email) may utilize such commands to cause scrolling of various window portions, e.g., horizontal or vertical scrolling of the email window portion 1231a, the preview pane 1231b or the folder pane 1231c. In this example, each command further provides for returning to the pointing at the particular email (e.g., 1231c, 1232b, 1232c).”

The following 6 new consecutive paragraphs are ADDED after the paragraph that begins at **page 74, line 3** with “A process by which voice-command elements can be derived...”:

“FIGS. 9a through 10b illustrate further interfacing system embodiments according to the invention. **FIG. 9a**, for example, illustrates an interfacing system 900 in which user 901 is using single-user machine 910 which includes an interface shown as voice interface 911. Similarly, in **FIG. 9b**, a user is using one or more of local system 921, remote system 922, and remote system 923. As shown, the user uses local machine 921 directly, remote machines 922 and 923 via the local interface of local system 921 and the remote interfaces of remote machines 922 and 923, and remote machine 923 via the coupling between local system 921 and remote system 923. In interfacing system 940 of **FIG. 9c**, the user uses one or more of underlying application(s) 933. As shown, user commands/dictation are received by voice interface 931 which is coupled via one or more speech program(s) 932 to one or more underlying application(s) 933. Voice interface 931 is further coupled to non-voice interface 934 and speech program(s) 932 is further coupled to I/O interface 935. Underlying application(s) 933 may also receive user input via non-voice interface 934 and I/O interface 935 (or via the above further couplings), and may provide output to the user via I/O interface 935 and non-voice interface 934 or via the above further couplings.

Interfacing system 940 of **FIG. 9d** also illustrates the user using one or more underlying application(s). This example, however, illustrates that user input is digitized by digitizer 941 and may be recorded by or bypass recorder 942. No directional arrows are indicated and underlying application(s) 944 may receive recognized input from one or more of recognition engines 943 or command-interpreted input from command interpreter 947. (Interpreter may also operate in conjunction with voice interface 948, which includes voice command information 948a and operational code information 948b.) Underlying applications 944 are also coupled via command interpreter 947 (which is further coupled to the user via recognition engines 943 and which engines 943 are also coupled to recorder 942), synthesis engine 946 (which is also coupled to recorder 942) and D/A converter 945. FIG. 9d does not, however, exclude other examples that are also depicted by FIG. 9d. (For example, recorder 942 is also coupled to underlying applications 944 via recognition engines 943 and command interpreter 947.) System 950 of **FIG. 9e** illustrates how information may be exchanged by a local system 951/speech engine of the local system to/from components of remote systems 952-956 that are coupled to the local system 951 (see directional arrows). The remote system component examples illustrated by system 950 include an application of remote system 952, a recorder of remote system 953, a transcriber of remote system 954, a translator of remote system 955 and parameters, e.g., of a user, stored by remote system 956.

The interfacing system 1000 example of **FIG. 10a** includes similar components as with system 940 of FIG. 9d. However, while system 1000 receives from a user conversant commands and dictation (e.g., conversant), a command interpreter is not explicitly depicted. In this example, an underlying application, e.g., of a host, includes database 1003a and interface 1003b, an example of which is depicted as interface 1003c. Interface 1003c includes various screens, each screen including interface regions and objects (e.g., 10A-10D and 10E respectively). As shown, user conversant commands/dictation may be digitized by digitizer 1001, recorded by recorder 1004 or both. Digitizer 1001/recorder 1004 output is received by recognition engine 1002 and recognized such information is provided to underlying (host) app 1003 or interface 1003b. Interface 1003b may also receive input from other I/O services via non-speech interface 1007. FIG.

10a also shows that underlying (host) app 1003 or interface 1003b output may be provided to speech synthesis engine 1006 or further components coupled thereto, and may be provided to other I/O services via non-speech interface 1007.

FIG. 10b illustrates an interfacing system 1010 example in which multiple users are depicted as using various devices for conducting workgroup or other interactions. As shown, for example, users 1011a2 and 1011a3 are both using local system-1, which includes conversant interface 1012, and users 1011a2 and 1011a3 are also using portable computing device 1011b and mouse 1011c respectively. User 1011a1 is using Local system-N 1013, user 1011a4 is using smart phone 1018d, users 1011a5-6 are using video conferencing machine 1018 and user 1011a7 is using tablet 1011a7. Various user devices are also remotely coupled to video conferencing machine 1018, as well as to shared I/O 1014, stereo, phone or production system 1017, translator 1018g and machine-N, which provides recorder/transcriber 1018e. Also coupled via a network are user-2 machine 1015 storing speech information, server 1016 storing user information and user-1 machines 1018f (with information to present. Cameras 1018e are further shown as proximate to movement of user 1011a6 (as shown by the illustrated directional arrow); in contrast to users 1011a6-7, however, user 1011a5 is shown as not moving and a corresponding camera captures the user's face, which is further shown in interface 1018c1.

An interface conversion system example is further illustrated by **FIG. 10c**. In the interface conversion system 1020 of FIG. 10c, interface conversion is performed by an interface conversion engine, and more specifically, voice interface conversion engine 1023. As shown from left to right, conversational commands are received by system 1020 that include tasks a1-N 1021a, 1021b having a context A 1022a and tasks b1-N 1021c, 1021d having a context B 1022b. Also received by voice interface conversion engine 1023 are inter-context tasks 1021e, which voice interface conversion engine 1023 converts and outputs to a coupled voice command interpreter. FIG. 10C further shows how, looking at system 1020 instead from right to left, the process would be reversed.

FIG. 10d further illustrates an exemplary new command converter. Converter control 1031 of new command converter 1030 controls host analyzer 1032 and host operation analyzer/mapper 1032. Host analyzer 1032a analyzes a host interface, e.g.,

using an interface mapper to map a host interface. Approach analyzer 1033a further analyzes an applicable approach and conversant factor checker checks application of conversant factors, thereby producing an interface output. Additionally, host operation analyzer map 1032b correspondingly analyzes/maps applicable host operation, underlying app check/map 1033d checks/maps an applicable underlying application and optimizer 1035 provides for optimizing the result (e.g., compiling), thereby producing an applicable control output. Each of the aforementioned system 1030 components is further coupled to and is operable in conjunction with iteration check 1033b and knowledge base 1033c.”

The following new paragraph is ADDED after the paragraph that begins at **page 100, line 13** with “Verbiage is further preferably the same or similar...”:

“**FIGS. 12e1 and 12e2** further illustrate simple and complex paging examples. These examples depict only 2 elements, i.e., containers and information contained inside the containers. In FIG. 12e1, for example, arrows 1a and 1b respectively show how simple paging may be used for redirecting from referring to a first container (e.g., file folder 1205) or information within a first file folder 1251 to referring to a second container (e.g., file folder 1252). FIG. 12e1 also shows how complex paging further provides for redirecting from the first container (file folder 1205) or information within a first file folder 1251 to referring to information 1253 inside file folder 1252. The FIG. 12e2 example instead illustrates a windowing interface, and should be recognized as a portion of the main OE window. (Paging may, for example, be conducted using the command “GOTO <foldername> (messages) and is illustrated using folders, but paging may also apply to any such re-direction.) Thus, this example provides for switching referencing from an OE folder object 1205a (e.g. inbox) or one of a list of email identifiers 1251a (e.g., specified as outbox messages) to a different folder object 1252 (e.g., specified as business folder) or email identifiers inside folder object 1252 (e.g., specified as business messages).”

The following new paragraph is ADDED after the paragraph that begins at **page 95, line 20** with “Efficient communicative voice-commands employing inter-item designation ...”:

“**FIG. 12f** illustrates an example of how selection and repositioning may be conducted using the terms “last”, “these last”, “these (next)” and “next”. In the example shown, a current designation is given by “a” references (2106a, 1262a, 1263a, 1264a), a selection is given by “b” references (1206b, 1262b, 1263b, 1264b) and a successive designation is given by “c” references (1206c, 1262c, 1263c, 1264c). In the **FIG. 12h** example, the command “Move next three to Business folder” is used, from a current email indicator (“current msg”) in an email pane, to select the corresponding emails (“next”, “three”), which are darkened. The command is provides for a “move” of the selected emails to the corresponding destination (“Business folder” in the folder pane) and feedback (here, returning to the email pane and to a corresponding email indicator in the email pane.”

The following new paragraph is ADDED after the paragraph that begins at **page 108, line 3** with “Following selection, “And move” and/or “And select” commands ...”:

“**FIG. 12g** illustrates an example in which designation (here, selection, repositioning and linking) is conducted in a consistent manner in conjunction with different underlying interface elements (e.g., windows) 1270 and 1270a, and despite the depicted different underlying interface types and uses that should be familiar to OE users. In the window 1270 example, a current email indicator is selected (e.g., “Select...”), a link plus operability (e.g., “And move...”) retains a previous selection and moves to a corresponding email indicator, and a further link plus operability (e.g., “And select...”) again retains the previous selection and conducts a further selection indicated by the darkened email indicators and arrow. In the window 1270a example, “Select...” selects the corresponding object (e.g., a presented Name input field), “name” enters “Name” in the input field, a link plus operability (e.g., “And phone <No.>”) retains a previous selection, moves to a corresponding object (e.g. phone number input field) and enters the <No.> into the field. In each of the examples, a further operability affects the selection, e.g., flagging the selected email indicators or finding data corresponding to the entered name plus phone respectively.”

The following new paragraph is ADDED after the paragraph that begins at **page 97, line 8** with “Reference-feature and reference-item methods can also be combined ...”:

“In the **FIG. 13a** examples, current and non-current underlying interface portions 1301b, 1301c (e.g., OE find people and select recipients windows respectively) are operated together in a consistent manner as with the singular underlying interface portion 1301d (e.g., OE new message window). As shown by arrows 1311 in the 1301a example, starting with a current designation in window 1301b, a user may utilize a corresponding command to add selected addressees from the selection field of window 1301b to selected ones of the output selection fields 1314b of window 1301c (e.g., addressee fields “to”, “cc” or “bcc”), in conjunction with which the user is returned to the current designation (arrow 1312). A user may also utilize a corresponding command to modify previous selection, for example, deleting selected addressees from the output selection fields 1314b of window 1301c (see arrows 1311), in conjunction with which the user is also returned to the current designation (arrow 1312). Example 1301a also illustrates the use of nth terminology 1314a (e.g., 1st, 2nd 3rd...) in conjunction with such commands and how indicators of such or separation indicators may also be added to and presented as part of the underlying interface. Examples of anti-aliases are also shown. A user may also similarly utilize a command for adding to or modifying selected addressees or attachments in the window 1301d example. A user may, for example, starting with a current designation of a portion of window 1301d (e.g., message body), add or delete selected addressee or attachment information using a similar command as with windows 1301b-c (arrows 1313), in conjunction with which the user is returned to the current designation. The use of nth and other terminology (e.g., and, thru, all) or addition of the same to window 1301d is also depicted.”

The following new paragraph is ADDED after the paragraph that begins at **page 105, line 5** with “The above window referencing methods can also be used ...”:

“**FIG. 14** illustrates an example of “merge and reply” or “merge and forward” commands. In this example, contact information may be retrieved from local/remote machines (e.g., local/remote address books coupled to OE) or from subject

messages, e.g., copying corresponding data from email windows 1401b, 1401c (line 1415a and arrows 1515b, 1412). Message information may be retrieved via corresponding email indicators, e.g., by opening corresponding messages indicated by window 1401a (arrow 1411) and copying the email information from the resulting open windows 1401b-c to the message body portion of window 1401d (arrows 1413a-b). Cycling/collecting data may be used as needed (arrow 1414), and annotation or added indicators (e.g., separator 1413c) may also be used.”

The following new paragraph is ADDED after the paragraph that begins at **page 34, line 30** with “The OEVI assistant scenario imposes largely ...”:

“The **FIG. 15a** illustration shows, for example, how rhythmic flow 1511 may be applied to user input, e.g., a determinable manner in which commands may be input while working with lists 1501. Factors for determining rhythmic flow (e.g., and correspondingly determining command portions in the illustrate4d example include degree of finality, break in momentum or new display.”

The following new paragraph is ADDED after the paragraph that begins at **page 22, line 14** with “Consider, for example, the OEVI-like assistant scenario ...”:

“**FIG. 15b**, for example, illustrates how switching or re-directing may be applied to machines such as multiple underlying interface portions (e.g., multiple windows 1502a-b) or different systems (e.g., remote and local systems 1521a-b).

Add the following new paragraph after the paragraph that begins at **page 67, line 2** with “FIG. 7e illustrates how an exemplary enhancement engine ...”:

“(FIG. 15c, for example, illustrates how an enhanced command may be used for switching between multiple interface portions, for example, lists of different types (e.g., multiple lists 1503a, 1503b that further may include multiple highlighting) or in conjunction with underlying interface portions, for example, divided forms, e.g., 1530, which includes data entry and list portions 1531, 1532 or not highlighted lists.)”

The following new paragraph is ADDED after the paragraph that begins at **page 70, line 15** with “Analyzer-filters 823-825 can, for example, be used...”:

“**FIG. 15d**, for example, illustrates an interfacing system 1504 embodiment in which analyzing, controlling or filtering received information is conducted using control suppressor 725 of application support engine 614, analyzer/ filters 822-926 of security engine 622, control suppressor 744 of enhancement engine 616 and substitutes/ parameters. In this example, machine-m 1504b may receive portions of the received information or substitute portions, or machine-m 1504b may receive only not-switched output while machine-n 1504c may received switched (e.g., private) information.”

The following new paragraph is ADDED after the paragraph that begins at **page 27, line 4** with “Tying command recitation or handling...”:

“**FIG. 15g** illustrates an example of received user input processing an interfacing system 1507. In this example, interpreter 1571 provides for trapping user input portions, which in this example include “mis-recitations”, such that the interpreter provides no output or processed output. Interpreter 1571 may also provide for other handling of the received mis-recitation, as indicated generally by the dotting of element 1572.”

The following 2 new consecutive paragraphs are ADDED after the paragraph that begins at **page 73, line 27** with “It will be appreciated that the utilization...”:

“The **FIG. 16** flowchart illustrates a method of conducting voice information. As shown, block 1602 includes receiving information, block 1604 includes receiving applicable task data and designations and block 1606 includes determining any pre, concurrent and/or post command extensions. Block 1608 further includes determining any task, data, designation or related feedback. Block 1610 includes effectuating machine operation corresponding to the task, data, designations and extensions. Block 1612 includes effectuating any additional feedback.

The **FIG. 17** flowchart illustrates a method for conducting user identification and interaction interpretation. As shown, block 1702 includes determining at least one of a comparative and a specific user identification of a user and block 1704

includes associating the user identification with a user (input) device. Block 1706 further includes determining applicable ones of user, group, security and interaction information corresponding to the user identification. Block 1708 includes receiving user input and block 1710 includes interpreting the received user input according to the association and corresponding one or more of user, group, security and interaction information. Block 1712 further includes intermittently determining at least comparative user identification e.g., potential substitution or other time/event occurrence.”

The 2 paragraphs that begin at Specification **page 49, line 1** are AMENDED as follows:

“Operation KB 407 includes existing command KB 407a, underlying machine KB 407b speech engine KB 407c and user/group KB 407d. Existing command KB 407a and underlying machine KB 407b include elements for enabling communication and operability command execution with known or new machines. Existing command KB 407b includes more generally applicable and communication information, such as pervasive commands 471, e.g. OS commands, general functions (see examples below), common commands (such as PC save, load and edit commands), and so on. Also included are connection and OS information 472, command/machine distribution information 473 (e.g. associated command/data structures, memory/storage locations, and so on), communication and command delivery or other communication protocols 474, and other information 474475. Underlying machine KB 407b includes machine capabilities 481 476, available controls 482 477, available feedback 483, available parameters 484 478, memory map information 485 479 (e.g. data/attribute or control layout of programs/devices), enhancement information 486 480 (e.g. desirable enhancements and implementation), and linking information 487 481 (e.g. for below discussed overlaying or other multi-machine capabilities). Other machine interfacing information 488 482 can also be utilized.

Speech engine KB 407c includes information pertaining to communicating with a particular speech recognition or synthesis engine, such as available control mechanisms 491 (e.g. information handling, synthesis speed/pitch, and so on), command parameters 492 (e.g. for other available controls or control variations), form information 493 and other information 494. (Note that attributes of other event/gesture processing engine peculiarities can also be utilized,

or one or more front or back end knowledge bases can also be utilized and other information can be utilized in accordance with a particular application.)”

The paragraph beginning at Specification **page 58, line 5** is AMENDED as follows:

“Enhancements 503 can provide peripheral capabilities that can further be related to other command portions. For example, an enhancement of “Send an email to C” might identify B as a current user, activate B’s PC, PIM, etc. (e.g. if remotely initiated), run an email-handling program or applet (if various programs might be run), initiate a new email message, address the message, and prepare (e.g. via curser repositioning) for an email message subject. Thus, a next user command can simply enter the subject (with corresponding enhancements of advancing the curser to the email message body, providing for additional addressing, etc) or redirect operation to a less-often utilized successive capability. See, for example, FIGS. 3a-c, 10b, 12a, 13b-c and 14.”

The paragraph beginning at **page 65, line 22** is amended as follows:

“FIG. 7d illustrates how an exemplary designation engine 615 provides for receiving designations from (typically) command engine 612 (FIG. 7b) and determining therefrom or “resolving” available references (typically in accordance with application support engine 614 of FIG. 7b or one or more of engines 621a-627 of FIGS. 8a-8g. As shown, various “designation modes” can be provided as pertaining to a particular user, application, machine, etc. or be provided on a more global basis, as with the OEVI. Designation control 731 provides an overall designation control mechanism, as already discussed. Explicit designation resolver 732, implied designation resolver 733, operation resolver 734, data resolver 735 and application-machine resolver 736 more specifically provide for resolution of explicit, implied, tool, data and application/machine specific designations respectively. Command input resolver ~~737~~ 736 provides for resolving available or applicable input commands, dictation or other data types (e.g. according to root, base, designation, extension, enhancement, user, group, user/group ID/status, history, context, and so on, for example, as was already discussed.

The paragraph beginning at **page 70, line 4** have been amended as follows:

“Analyzer-filters 823-826 and analyzer 822 ~~822-826~~ facilitate security more particularly related to the freedom provided by conversance or otherwise more “free-form” I/O. That is, rather than treating user/ machine input treated as generic, analyzer-filters 823-826 and analyzer 822 ~~822-826~~ provide for determining received information content or content types and, upon determining such information (e.g. a particular designation, specificity, confidential data element, etc.), provide for correspondingly removing, modifying or replacing the input element(s). Such analysis/determining can, for example, be conducted via parsing input, stored or for-output information respectively, and comparing the information to a stored or otherwise ascertainable element set; such element or elements can be replaced, deleted or modified in accordance with corresponding elements or other processing (e.g. users, purposes, contexts, tasks, applications, machines, providing feedback, etc.) (Other suitable mechanisms can also be used.).